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09/891,038	06/25/2001	Matthias Wandel	555255012248	9468

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EXAMINER

BENGZON, GREG C

ART UNIT PAPER NUMBER

2144

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/891,038

Applicant(s)

WANDEL ET AL.

Examiner

Greg Bengzon

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 67-80 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 67-80 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

This application has been examined. Claims 1-66 have been cancelled. Claims 67-80 are pending.

Priority

This application claims benefits of priority from application 60/214080 filed on June 27, 2000.

The effective date of the claims in this application is June 27, 2000.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 67-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US Patent 6535493), in view of Magret et al. (US Patent 6804221) hereinafter referred to as Magret, further in view of what was well-known in the art.

Lee disclosed of a communication protocol for critical on-site communications for mobile units using base stations connected to a LAN. Initially, the process of FIG. 8 checks whether it has received a packet from a wired network such as from the Ethernet network in step 422. If not, the process is idled at step 422 until a packet has been received from the wired network. From step 422, the process of FIG. 8 checks whether the requesting packet is an ARP request in step 424. If so, the process of FIG. 8 further checks whether or not the current AP is acting as a home agent in step 428. If the AP is not acting as home agent, the process loops back to step 422 to repeat the incoming packet routing process. Alternatively, if the current AP is acting as the home agent in step 428, a proxy ARP response is sent in step 430.

Lee disclosed (re. Claim 67) a plurality of local base stations coupled to a local area network (LAN), the local base stations being configured to send and receive data over the LAN and to communicate wirelessly with the plurality of mobile devices (Lee - Column 4 Lines 15-60) ; the plurality of local base stations each having a network address on the LAN and are configured to send and receive data over the LAN using the network addresses (Lee - Column 4 Lines 15-60); a subscription server (Lee- Column 11 Lines 35-40) operating on the LAN that is configured to identify the local base stations covering one or more of the mobile devices, the subscription server enabling the local-area wireless communication system to locate mobile devices that are in communication with the local-area wireless communication system (Lee - Figures 4 thru 6, Column 9 Lines 10-65);

However, Lee did not disclose (re. Claim 67) locating mobile devices without requiring communication between the plurality of base stations. Lee did not disclosed (re. Claim 67) wherein each local base station being configured to maintain a routing cache based on communications received from other local base stations, the routing cache identifying which of the plurality of local base stations were last in contact with mobile devices from which the communications were initiated; and each local base station being further configured to route an outgoing communication directed to a particular mobile device through a different local base station using the routing cache without requiring the local base station to access the subscription server and without sending information to other base station not involved in the communication, and wherein the base stations only access the subscription server when the routing information is not available in the local base station cache.

Magret disclosed (re. Claim 67) each local base station being configured to maintain a routing cache (Magret – 'Column 16 Lines 22-35,'coverage cache', Column 9 Lines 25-35) based on communications received from other local base stations (Column 8 Lines 3-8), the routing cache identifying which of the plurality of local base stations were last in contact with mobile devices from which the communications were initiated; and each local base station being further configured to route an outgoing communication directed to a particular mobile device through a different local base station using the routing cache without requiring the local base station to access the

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subscription server (Magret – Column 8 Lines 15-20). Magret disclosed (re. Claim 67) locating mobile devices without requiring communication between the plurality of base stations (Column 14 Lines 34-36, Column 16 Lines 60-65). Magret disclosed (re. Claim 67) without sending information to other base station not involved in the communication (Column 14 Lines 34-36, Column 16 Lines 60-65).

Lee and Magret are analogous art because they present concepts and practices regarding the registration of mobile nodes and routing packets to and from mobile nodes in both home and foreign domains. At the time of the invention it would have been obvious to combine the teachings of Magret regarding a routing cache in the base station. The motivation for said combination would have been, as Magret suggests (Magret- (Magret – Column 7 Lines 25-30), to enable mobility while supporting a 'make before break scheme', which is essential for voice over IP applications.

However, Lee-Magret did not disclose (re. Claim 67) wherein the base stations only access the subscription server when the routing information is not available in the local base station cache.

At the time of the invention it would have been well-known in the art that local cache storage is queried first, before other forms of storage (such as a server), and that

if the local cache storage is able to provide the information required then the need to query other forms of storage is made unnecessary.

At the time of the invention it would have been obvious to combine what was well known in the art into Lee-Magret, such that the base stations query the coverage cache first and only submit further queries if the coverage cache does not hold the required information. The motivation for said combination would have been to implement the cache storage in a manner which increases the speed of information retrieval. (See Mead, US 6680942 B2, Figure 2)

Lee did not disclose (re. Claim 69) wherein each local base station includes a subscription list that identifies the mobile devices currently covered by the identified base station. Lee did not disclose (re. Claim 70) wherein the local base stations are configured to purge from the route cache data relating to any mobile device to which the local base station has not been in communication for a predefined interval of time.

Magret disclosed (re. Claim 69) wherein each local base station includes a subscription list that identifies the mobile devices currently covered by the identified base station (Magret – Column 9 Lines 25-35, Column 16 Lines 20-35). Magret

disclosed (re. Claim 70) wherein the local base stations are configured to purge from the route cache data relating to any mobile device to which the local base station has not been in communication for a predefined interval of time. (Magret – Column 17 Lines 20-35)

Lee and Magret are analogous art because they present concepts and practices regarding the registration of mobile nodes and routing packets to and from mobile nodes in both home and foreign domains. At the time of the invention it would have been obvious to combine the teachings of Magret regarding a routing cache in the base station. The motivation for said combination would have been, as Magret suggests (Magret – Column 7 Lines 25-30), to enable mobility while supporting a 'make before break scheme', which is essential for voice over IP applications.

Lee disclosed (re. Claim 68) wherein the subscription server also logs subscription information for one or more of the mobile devices (Lee - Figures 4 thru 6, Column 9 Lines 10-65); (re. Claim 71) wherein the local-area wireless communication system operates within an office. (Lee - Column 4 Lines 15-30)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 72-80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US Patent 6535493) in view of Magret et al. (US Patent 6804221) hereinafter referred to as Magret, further in view of what was well-known in the art, further in view of Lazaridis et al. (US Patent 6219694), hereinafter referred to as Lazaridis.

The combination of Lee and Magret did not disclose (re. Claim 72,73 , 76, 77, 80) a redirector a redirector configured to interface the local-area wireless communication system with a widearea wireless network. The combination of Lee and Magret did not disclose (re. Claim 80) wherein the redirector is further configured to forward electronic mail messages from the mail server to the mobile devices.

Lazaridis disclosed (re. Claim 72,73 , 76, 77, 80) a redirector a redirector configured to interface the local-area wireless communication system with a wide area wireless network (Lazaridis - Column 8 Lines 30-55, Column 11 Lines 25-45) ; (re. Claim 73) routing the outgoing communication to the redirector if the identified mobile device is not currently in communication with the local-area wireless communication system (Lazaridis – Column 7 Lines 15-20); (re. Claim 77,80) wherein the redirector is

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further configured to forward electronic mail messages from the mail server to the mobile devices. (Lazaridis - Column 10 Lines 50-65)

Lee, Magret and Lazaridis are analogous art because they present concepts and practices regarding communication systems for mobile communication devices involving text and voice data over a LAN. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the teachings of Lazaridis regarding 1) the redirector software into the combined system of Lee and Magret . The suggested motivation would have been, as Lazaridis suggests, to overcome the bandwidth limitations in wireless networks and implement the practice of 'pushing data' to the mobile user in order to facilitate timely responses to critical or emergency communications. Due to the bandwidth limitations of wireless networks, only a portion of a data item is generally redirected to the user's mobile device, with the user given the option of then retrieving the entire data item (or some other portion of the data item) from the host system. Without the implementing the push a mobile user may fail to respond to an emergency updates, requests, meeting notifications, and news bulletins because the user only periodically checks for updates and stored messages.

The combination of Lee and Magret disclosed (re. Claim 72) the plurality of local base stations being further configured to: determine if an identified mobile device is currently in communication with the local-area wireless communication system when an

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outgoing communication is directed to the mobile device (Lee – Column 6 Lines 25-35); routing the outgoing communication to the identified mobile device over the local area wireless communication system if the identified mobile device is currently in communication with the local-area wireless communication system (Lee – Column 6 Lines 20-25) ; (re. Claim 73) whereby mobile devices are able to send and receive data while roaming between the wide-area wireless network and the local-area wireless communication system (Lee - Column 5 Lines 1-65) ; (re. Claim 74) wherein the plurality of mobile devices use a wide-area wireless network protocol to communicate over both the local-area wireless communication system and the wide area wireless network (Lee - Column 5 Lines 1-65)

The combination of Lee and Magret disclosed (re. Claim 75) wherein the plurality of local base stations each have a network address on the LAN and are configured to send and receive data over the LAN using the network addresses, and wherein the data received from a mobile device using the wide-area wireless network protocol is tunneled through the LAN using the network address for a local base station (Lee - (Column 5 Lines 25-35) ; (re. Claim 78) wherein the mobile devices transmit and receive electronic mail messages over the local-area wireless communication system and the wide-area wireless network (Lee - Column 5 Lines 1-65); (re. Claim 79) wherein the mobile devices transmit and receive voice communications over the local-area wireless communication system and the wide-area wireless network (Lee - Column 5 Lines 1-65).

Response to Arguments

Applicant's arguments have been considered but are moot in view of new ground(s) of rejection presented for Claims 67-80.

With regards to a subscription server, while Lee disclosed an ARP server (Lee-Column 11 Lines 12-25) in conjunction with the home agent, Magret also disclosed a location server (Magret-Column 6 Lines 30-50). Both Lee and Magret thus disclosed embodiments of a subscription server that provides the location information of a mobile node.

Regarding the base stations, there is no distinction between the Applicant's base station and Magret's base station and base station routers, since Magret's base stations include memory (Magret – Column 16 Lines 22-35, 'coverage cache', Column 9 Lines 25-35) and processing capability to direct messages to mobile units (Magret-Column 9 Lines 20-25).

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant.

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Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please refer to the enclosed PTO-892 form.

US 6680942 B2 Mead; Andrew et al. - the router checks its DLSw reachability cache in order to determine if the DA address of the packet is saved in the cache.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

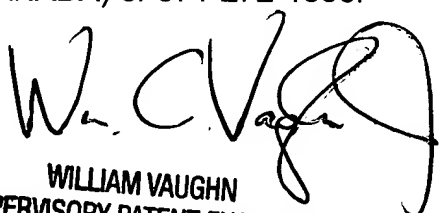
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Bengzon whose telephone number is (571) 272-3944. The examiner can normally be reached on Mon. thru Fri. 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on (571)272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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